



Network Centric Operations  
Industry Consortium

# **FORCEnet 2005**

**Celebrating Success**

Carl G. O'Berry  
Executive Chairman  
June 28, 2005

# Network Centric Operations

*... the Information Age transformation enabler*



# Interoperability Tools and Rules

- Reference Models
  - Defining & integrating architectures
  - Enabling networks and their integration on demand
- Minimum Level of Interoperability (Necessity)
  - Connect
  - Communicate
  - Register and Discover
- Higher Capability Nodes and Network Integration (Sufficiency)
  - Meeting operational needs on demand, wherever required
  - Enabling integration of many nodes for increased capability
  - Reducing operational costs and continuously improving effectiveness

# Advancement of Military Transformation Objectives

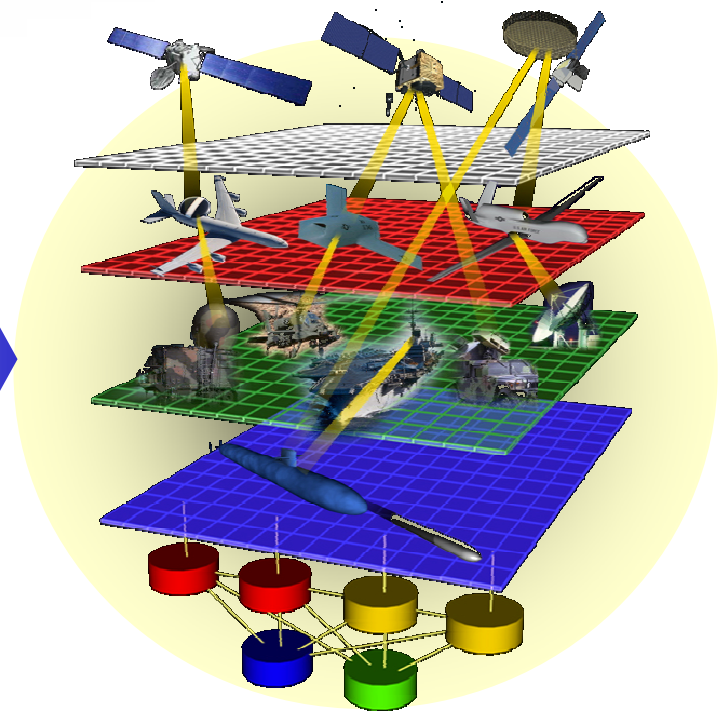
*Today*



**Transformational Programs**



*Tomorrow*



***Platforms Evolving to Integrated Systems***

# Advancing *Global* Interoperability



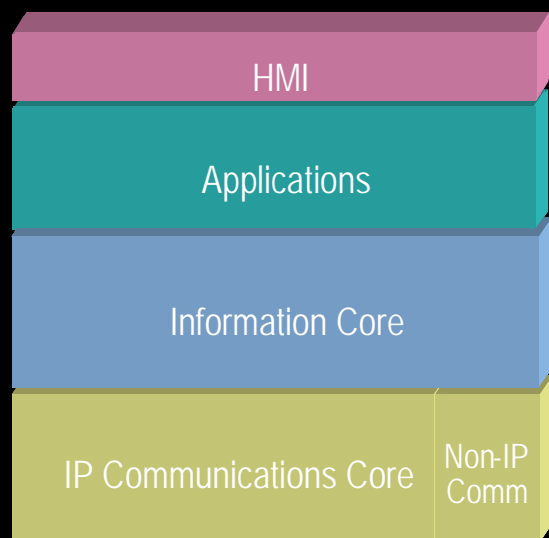
\* Products/platforms are shown here for informational purposes only.

# Industry's Role as an Enabler



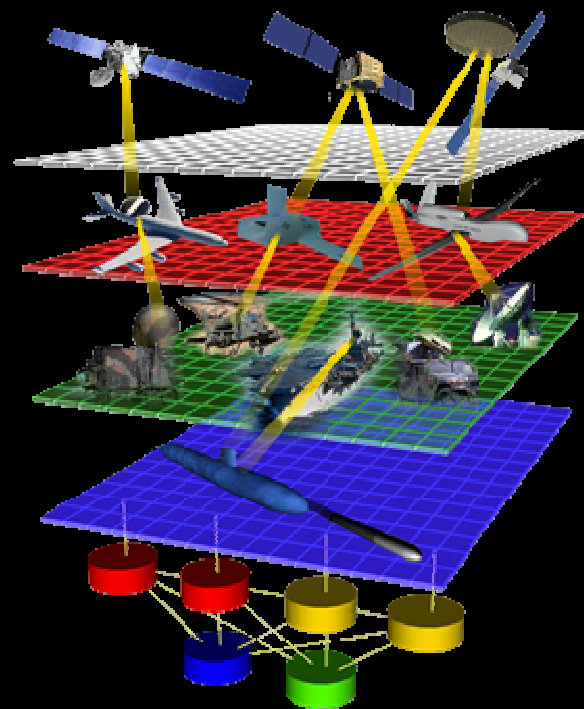
- Keep emergent standards watch-list, impart common “DNA” in new products
- Employ best commercial technology & IT practices for both current and emerging capabilities
- Provide ad hoc infrastructure-enabling resources
- Collectively deploy and evolve effective infrastructure architectures

# Network Centric Operations Industry Consortium (NCOIC)



**NCOIC**

*Developing a secure  
interoperability framework  
that enables evolution of  
Network Centric Operations*



***Accelerate Interoperability in Systems that Serve Military,  
Homeland Security, Civil, and Commercial Users***

# Numerous Complementary NCO Consortia

NCOIF – discussion/study group

Impacts of net-centric operations

AFEI – consensus group

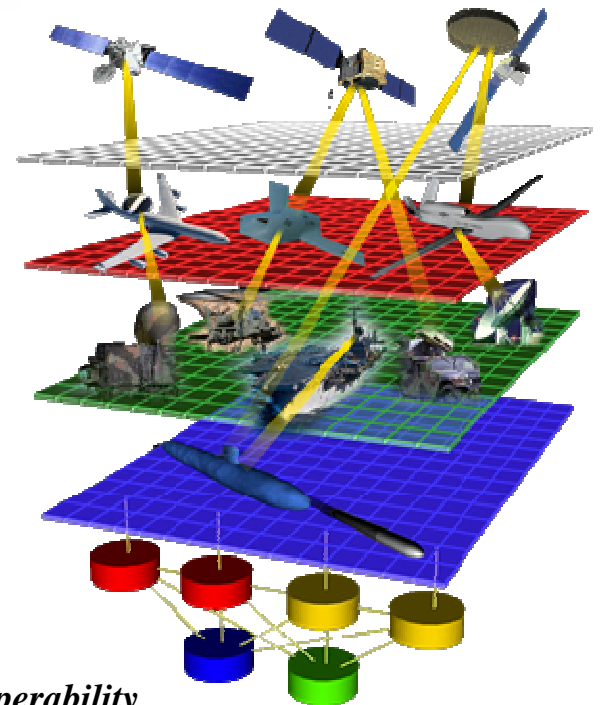
Advanced enterprise integration for industries and governments

W2COG – liaison to DoD  
for engineering groups

Harmonizing efforts to engineer the environment

NCOIC – engineering group

Information networks/platforms interoperability - Engineering interoperability



# Founding Members of NCOIC



BAE SYSTEMS

BOEING

CACI  
EVER VIGILANT™

CB  
TECHNOLOGIES

CISCO SYSTEMS

EADS  
The step beyond

EMC<sup>2</sup>  
where information lives

ERICSSON

factiva  
WORK-TOGETHER

FINMECCANICA

GENERAL DYNAMICS

hp  
invent

Honeywell

IBM

Innerwall

L3  
communications

LOCKHEED MARTIN

Microsoft

NORTHROP GRUMMAN

ORACLE

Raytheon

Rockwell  
Collins

SAAB

SAIC  
An Employee-Owned Company

smiths

Sun  
microsystems

THALES

THEMIS  
COMPUTER

# 73 NCOIC Members

As of June 23, 2005

- Aerospace Corporation
- AeroVironment Inc.
- Alcatel Government Solutions
- Anteon Corporation
- Argon St
- BAE Systems North America
- Ball Solutions Group
- Bay Microsystems Inc
- Bearing Point
- Boeing
- CACI
- Camber Corporation
- CB Technologies
- Ciena Government Solutions
- Cisco Systems
- Cryptek, Inc.
- Crystal Group, Inc.
- EADS
- EDISOFT S.A.
- EFW
- EMC
- Engenio Information Technologies
- Ericsson
- Factiva
- Finmeccanica
- FlightSafety International
- General Dynamics
- Harris Corporation
- Hewlett-Packard
- Honeywell
- IBM
- INDRA
- Innerwall
- Innovative Concepts, Inc.
- Institute for Defense Analyses
- Intel
- Israel Aircraft Industries
- ITT Industries
- Johns Hopkins U. Applied Physics Lab
- L-3 Communications Integrated Systems
- Lockheed Martin
- Marconi Communications Federal Inc
- MBL International, Ltd.
- McDonald Bradley, Inc
- Microsoft
- MITRE
- Motorola
- Northrop Grumman
- Objective Interface Systems, Inc.
- Oracle
- PTC
- Raytheon
- Real-Time Innovations, Inc
- Rheinmetall Defence Electronics GmbH
- Rockwell Collins
- Saab
- SAIC
- SAP Labs, Inc.
- SRI International
- RUAG Electronics
- Sikorsky Aircraft
- Smiths Aerospace
- Software Engineering Institute/Carnegie Mellon University
- SPARTA, Inc
- Sun Microsystems
- SuprTEK
- Systematic Software Engineering A/S
- Terma A/S
- Thales
- Themis Computer
- Wakelight Technologies, Inc
- West Virginia High Tech. Consortium Foundation
- Wind River Systems

**24 Tier 1 Members = \$150,000 + 4 Full-Time Equivalents**  
**3 Tier 2 Members = \$75,000 + 2 Full-Time Equivalents**  
**46 Tier 3 Members = \$1,000 to \$25,000 + 1 Full-Time Equivalent**

# Major NCOIC Success Factor – The Customer Advisory Council

- Represents U.S. and allied government/agency interests to the NCOIC in its pursuit of open systems applications through NCO.
- Advises NCOIC leadership on customer NCO/NCW issues, needs, requirements and direction
- Provides thought leadership to the Consortium in developing innovative concepts and strategic direction
- Encourages participation of NCO/NCW thought leaders, industry, and associated organizations with the NCOIC
- Encourages and leverages openness of communication at all levels of the Consortium

# Current Advisory Council Composition

- **Dr. Paul G. Kaminski**
- LTG Steven W. Boutelle
- VADM (USN Ret) Arthur K. Cebrowski
- Lt Gen (USAF, Ret) James R. Clapper, Jr.
- Mr. Bill Dawson
- Maj Gen Georges D'hollander
- Dr. Vitalij Garber
- Ms. Priscilla E. Guthrie
- Lt Gen William T. Hobbins,
- Mr. Lee Holcomb
- VADM James D. McArthur, Jr.,
- Gen (USAF, Ret) James P. McCarthy
- Mr. Arthur L. Money
- Maj Gen (ret) Staffan Näsström
- Lt Gen Harry D. Raduege, Jr.,
- LtGen Robert M. Shea, USMC
- Maj Gen Ruud van Dam, AF Netherlands
- LTG Robert W. Wagner, USA
- Dr. Dag Wilhelmsen

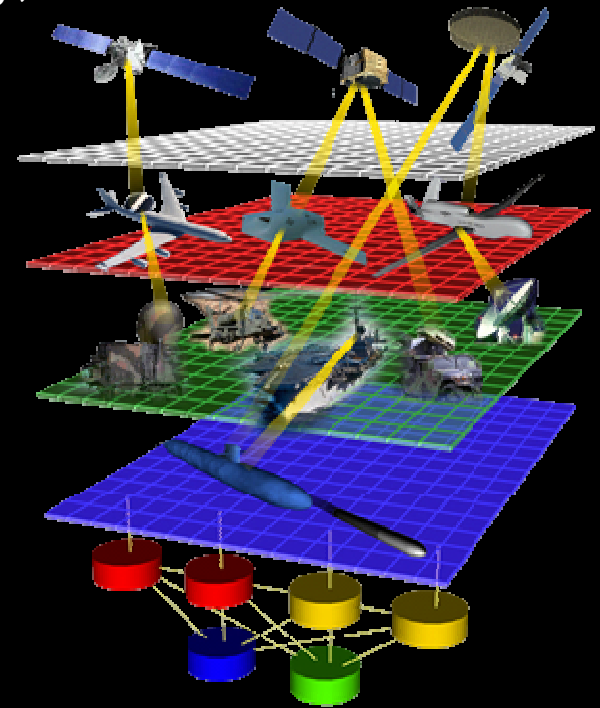
## AC Chairman

U.S. Army  
OFT  
NGA  
Intelligence Community  
NATO HQC3S  
OUSD (A, T, &L)  
OASD (NII)  
U.S. Air Force  
DHS  
U.S. Navy  
USAFA  
At large  
Swedish DMA  
DISA  
JCS  
NATO SACT  
JFCOM  
NATO C3 Agency



# Summary of NCOIC Objectives

- Accelerate Interoperability in systems that serve military, homeland security, civil and commercial users
- Perform analysis of pertinent government architectures and mandated open standards
- Work with Customers to develop a secure interoperability framework the enables increasing degrees of Network Centric Operations
- Identify Off-The-Shelf (OTS) and other open standards based building blocks
- Education and Outreach to increase awareness and adoption of open standards identified by NCOIC
- Develop Collaborative Engineering Environments



# Vision for a Global NCO Environment



***Industry is involved, committed, and investing!***